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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,321	10/31/2003	Jos van den Bogerd	143766-1	9819
23413	7590	10/13/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002				ZEMEL, IRINA SOPHIA
ART UNIT		PAPER NUMBER		
		1711		

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/698,321	BOGERD ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Irina S. Zemel	1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 September 2006.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3-28 and 30-48 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3-28 and 30-48 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/20/06/5/22/06.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 , 3-25, 27-28, 30-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in combination with Adachi or, in the alternative, as being unpatentable over Döbler in combination with Adachi and further in view of US Patent 4,648,710 to Ban et al., (hereinafter “Ban”).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Adachi et al. as applied above, and further in view of Burkhardt et al.

Claims 13-16 and 26-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Adachi et al. and further in view of MacGregor et al.

Claims 35, 37-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Adachi.

Claims 1 , 3-25, 27-28, 30-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Fujita et al., or in the alternative, over Döbler in view of Fujita et al., in combination with Ban.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Fujita et al. as applied above, and further in view of Burkhardt et al.

Claims 13-16 and 46-48are rejected under 35 U.S.C. 103(a) as being unpatentable over Döbler in view of Adachi et al. and further in view of MacGregor et al.

All of the above rejections stand as per reasons of record.

***Double Patenting***

Claims 1, 3-28, 30-48 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 and 24-39 of copending Application No. 1 1/124223.

The rejection stands as per reasons of record.

***Response to Arguments***

Applicant's arguments filed 7-31-2006 have been fully considered but they are not persuasive. The applicants argue that the Dobler reference can not be combined with Adachi reference for the reasons that the Adachi discloses thermosetting coating layers, while Dobler teaches thermoplastic core layers. The second reason presented by the applicants against combining the teachings of the two references is that the layers of Adachi are produced by solution coating, while the layers of Dobler are produced by co-extrusion, which can only be done with thermoplastic materials. While the basic disclosure of the references is as described by the applicants, i.e., Dobler discloses thermoplastic layers obtained by co-extrusion, while Adachi discloses solution coated layers obtained from thermosetting materials, the applicants solely concentrate on the difference in the teachings of the references, instead of the teachings of the references as whole, and more importantly, the teaching of the references the examiner relied upon in proposing modification of the base reference in view of the secondary reference. The applicants go to a lengthy discussion (over 3 pages long in various

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place of the response) why the co-extrude layers of Dobler could not be obtained from solutions of Adachi. The examiner simply can not see the relevance of this discussion to the rejection and to the proposed modification of the Dobler reference. The examiner NEVER suggested or proposed to modify Dobler in such a way as to either use the thermosetting materials of Adachi in place of the thermoplastic materials of Dobler, or to try to extrude the thermosetting materials of Adachi, or to apply coating solutions of Adachi as a layer in structures disclosed by Dobler. The teachings of Adachi was relied upon solely for disclosure of the claimed UV absorbers. Thus, as discussed above, the arguments presented by the applicants on pages 13, 14, 18, etc., and related to solution coating layers of Adachi and processing of such layers is completely irrelevant to the outstanding rejection, since, as discussed above, such modification was not a part of the rejection, and the applicants completely misinterpreted and misrepresented the rejection by implying that the examiner relied or proposed such modification of the base Dobler reference.

The examiner, as discussed in the previous office actions relied on Adachi as teaching UV absorbers which correspond to the claimed borides. The applicants state in their response that "While the Examiner alleges that lanthanum boride "is expected to act similarly in any transparent substance whether thermoplastic or thermosetting or even non-polymeric," she provides no evidence thereof. Based on the admission that the materials are "notoriously" different and the failure to provide no additional motivation for an artisan to combine the distinct teachings of the two references, the Examiner has failed to establish a prima facie case of obviousness." First of all, the

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examiner provided evidence why it is expected that non-reactive material is expected to act or behave similarly in any base transparent material, i.e., the fact that the lanthanum boride is used as UV absorbent for its specific physical characteristics (selective cutting off light with specified wavelength, while transmitting light of higher wavelength) and the UV absorber is s a non-reactive component, an not the interactions with base material (which there are minimal interactions since the UV absorber is a NON-reactive inert material towards the base transparent material). which action is based on its physical properties. Thus, the "notoriously" different properties of the base transparent materials are irrelevant so long as the difference do not significantly contribute to the interactions of the UV absorber and the base material. The applicants attention is further directed to the background section of Adachi reference where the reference discusses known UV absorbent and their properties, and expressly lists titanium and zinc oxides, along with benzophenons as known UV absorbers. The reference does not state that those UV absorbers are only suitable for thermosetting coating materials. It just discussed known UV absorber, which are picked based on their physical properties, clearly implying that those UV absorbers are suitable for wide variety of transparent materials. Even, if, arguendo, the teaching of the background section may be interpreted as being relevant only to the thermosetting materials such as Adachi's material, the same very UV absorbers are listed a suitable for thermoplastic materials of Dobler. This is a further evidence in support of the examiners position that UV absorbers act similarly regardless of the nature of the base transparent material. Adahi discovered that the borides exhibit better properties as UV absorbers as

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compared to known zinc and titanium oxides (which are expressly listed as suitable for Dobler thermoplastic compositions). This fact, along with the earlier discussed facts related to the physical properties of the claimed (and disclosed by Adachi UV absorbers) is an additional motivation to use such absorbers in compositions of Dobler.

The applicants further argue that one of ordinary skill in the art would not have been motivated to remove *IR* [sic, probably meant UV] additives of Adachi and substitute them into layers of Dobler without coupling agents. Note that the entire paragraph bridging pages 13 and 24 of the applicants response is directed to IR absorbers, which is NOT related to the disclosure of Adachi. It is assumed that the discussion is intended to be directed to IR absorbers. First of all, there is nothing in the claims that preclude the presence of coupling agents. Second of all, one of ordinary skill in the art and dealing with dispersion of powdered UV absorbers (such as expressly disclosed TiO<sub>2</sub>, for example – in both types of thermosetting or thermoplastic environment) would have been well aware of how to effectively disperse similar borides powders in those polymers. See for example illustrative and comparative examples of Adachi using either borides or ZnO<sub>2</sub> in similar manner, and also [0051] of Dobler stating that ZnO<sub>2</sub>, for one is known as UV absorber for thermoplastic materials clearly implying that one of ordinary skill in the art would have known how to handle it (and similar boride powder) dispersion in thermoplastics.

Applicants arguments regarding the second cap layer as similarly unconvincing. The examiner is still of the opinion that she clearly established obviousness of adding the second layer, at least based on the established case law of obviousness of

"duplicating of parts", or, in this case, layers. The applicants clearly can overcome this rejection by showing of unexpected results. However, mere statement that "the results clearly show that in the aformentioned configuration there is improved transparency, low haze and better color" without any reference to the specifically claimed configuration (second cap layer) as compared to the expressly disclosed configuration (without second cap layer) is NOT an evidence of unexpected results that can be attributed the claimed difference in the claimed and disclosed structure.

As far as the arguments regarding claim 26, once again this argument is based on the applicants erroneous interpretation of the rejection and the assumption that the examiner, somehow, proposed substitution of extruded thermoplastic layers of Dobler with coating layers of Adachi. Since, as discussed above, in detail, this is NOT the case, the applicants arguments regarding claim 26 are simply irrelevant to the outstanding rejection.

The arguments regarding claims 13-16 and 46-48 are based on alleged deficiencies in combining Dobler with Adachi, and, as such, have been previously addressed.

As far as the arguments regarding claims 1,3-23, 25, 27-28, 30-48 as rejected over Dobler in combination with Fujita (and alternatively with Ban), the arguments are not convincing either. The examiner never alleged, as argued by the applicants that Dobler discloses the claimed invention. The examiner alleged that addition to the third layer would have been obvious in the absence of showing of unexpected results. As

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far as the thickens of the layers – the same very paragraph of Dobler relied upon by the applicants clearly teaches layers on mm thickness.

The invention as claimed, thus, is still considered to have been obvious from the combined teachings of the cited references.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irina S. Zemel  
Primary Examiner  
Art Unit 1711

ISZ

